Whence The Soldier Of The Future?

Recruiting and Training for the Objective Force

A Monograph
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14. ABSTRACT

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Abstract

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This paper analyzes the U.S. Army process for recruiting and training soldiers to determine if Army Transformation is properly geared toward manning the Objective Force. The study begins by analyzing the nature of the battlefield of 2020 in order to determine what skills and traits will be required of the Objective Force soldier. The study then goes on to review the Army process for selecting and recruiting soldiers, as well as any planned changes in those processes. Finally, the study reviews lessons learned from pertinent Army training and experiments, to include the Digital Division, the Army Experiment Program, and the Interim Brigade Combat Team (IBCT) to determine if there are any relevant lessons for training future soldiers.

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CHAPTER ONE

INTRODUCTION

> We must improve our strategic responsiveness. Our core competency will remain fighting and winning wars with speed, with overwhelming power, and with lethal decisiveness. But we will also demonstrate our flexibility, our versatility, and our agility when responding to a wider range of missions – including peacekeeping humanitarian assistance, and operations designed to counter emerging threats.[1]
>
> General Eric K. Shinseki, 2000.

Army Transformation is the term used to describe the ongoing U.S. Army initiative to transform itself for the future. Shortly after assuming his duties as the 34th Army Chief of Staff in June of 1999, General Eric K. Shinseki unveiled his plan to transform the Army.[2] However, Army Transformation's genesis can be found sometime after the Army's two seminal events of the 1990s: the end of the Cold War and the Coalition victory over Iraq in 1991. At that time the Army found itself with a large and strategically immobile force designed to fight a heavy, armor-centric land war against the now decrepit Soviet Army. The Army of 1991 – large and lethal, but forward deployed – was the end product of an arms race that helped win the Cold War by virtually bankrupting the Soviet Union, arguably leading to its demise.[3]

The decade that followed 1990 has been one during which the Army was forced to face daunting questions about its relevance and its very usefulness to the security environment of the new century. The Cold War U.S. Army was no longer needed to fight the Soviet Union, the Iraqi Republican Guard, or any other peer armed force. As the Army drew down in size it retained a larger proportion of its forces in the continental United States (CONUS) to deploy in the event of conflict. Unfortunately, these heavy CONUS-based forces are slow to deploy, difficult to sustain, and vulnerable to asymmetric threats.[4] Lieutenant Colonel Marion Van Foss of the Defense Advanced Research Projects Agency (DARPA) sums up the problem by stating that "our heavy forces are too heavy and our light forces lack staying power."[5] The question the Army then

faced, and continues to face, was what new kind of army was needed? Recent geo-political events have shown that the end of the Cold War proffered no "peace dividend." Instead, conflicts in such places as Bosnia, Haiti, Somalia, Kosovo, and the Middle East have given us a glimpse into the turbulent beginnings of the 21st Century, in which the developed world will be starkly at odds with underdeveloped areas of the third world.[6] Without an apparent need for forward-deployed, heavy forces, and with the tremendous technological benefits promised by the coming digital age, could the United States Army field a more strategically responsive yet decisive force? It was out of this reflection that Army Transformation was born.

Army Transformation has spawned a lively, spirited, and intense debate within the Army and, to some extent, within the U.S. military as a whole. Initially this debate centered not only on the direction that Transformation would take, but focused as well on the very need for Transformation itself. As the above quote from General Shinseki points out, however, the debate about the need for Transformation appears to be settled. What is not settled, however, is the debate concerning Army Transformation's direction. Will the Objective Force be analog or digital? Will the force be light, medium, heavy, or a mix? How will doctrine change to enable the new force? Will the Army retain the divisional structure or will some new basic tactical force structure be formed? All of these questions have been asked and various possible answers tested during numerous debates, experiments, initiatives and war games. What has largely gone unexplored, however, is the impact Army Transformation will have upon the way that soldiers are recruited and trained.

The Draft Field Manual 3-0, Operations, states that "success in battle depends upon sound doctrine; competent leadership, effective weaponry, equipment, and organizations; and well-trained, quality soldiers and units. The most important of these are soldiers."[7] As the Navy is a ship-based force and the Air Force an airplane-based force, the Army is foremost a soldier-based force. General Shinseki's Army Vision describes people as being "the engine behind our

capabilities."[8] The process of Army Transformation must take that basic assertion into account by exploring whether the process of recruiting and training soldiers itself needs to be transformed.

Army Transformation seeks to capitalize upon a variety of new technologies – even to drive new technological development – to field a force capable of precision engagement, dominant maneuver, and decisive information operations.[9] These technologies will be incorporated into systems across the full spectrum of the force requiring all soldiers, from infantryman to combat medic to operations clerk, to be capable of manipulating complex and networked systems upon a more dispersed battlefield. Douglas Macgregor, in his important work Breaking the Phalanx, states:

> Increasingly lethal weapons lead to greater dispersion of combat forces and to increases in individual unit mobility. The necessity for command, control, and sustainment of dispersed formations increases reliance on subordinate officers' and soldiers' judgement, intelligence, and character.[10]

Conceivably, decisions made by individual soldiers of the future could therefore have a much greater impact upon the mission than the decisions of the soldier of today. That future soldier must be highly intelligent, computer literate, and capable of performing his duties in a less structured and/or supervised environment. Secretary of the Army Louis Caldera, speaking on Army Transformation, stated that

> …we are still only as good as the people we will have to operate this very complex equipment that we are going to field in the future – the people who bring the intangibles of courage and leadership and good judgement and forceful decision-making on the network-centric battlefield of the future.[11]

Although Army Transformation continues to move forward, Army Recruiting is mired in a decade-long trend of struggling to meet enlistment goals. Major General Evan Gaddis, Commander of Army Recruiting Command (USAREC), stated recently that "we were in a death spiral – the best way to put it – for seven years."[12] The Army is finally expected to meet its recruiting goal this year, forecasting that it will enlist 80,000 recruits for the active force and 42,000 recruits for the Army Reserve.[13]

However, the Army accomplished this recruiting turnaround at great cost. The Pentagon's recruiting ad budget, just $70 million in 1993, topped out at more than $265 million in fiscal year 2000.[14] The Army has also incurred other costs for which it is difficult to assign a dollar amount, costs for programs such as sending recent enlistees home for recruiting visits, partnering with industry, and shifting recruiting stations away from metropolitan areas to untapped rural areas.[15] Additionally, the quality of new recruits has decreased. The booming U.S. economy of the 1990s has made it more difficult to recruit among a pool of increasingly college-bound high school graduates. This decrease in quality has directly translated into higher levels of first term attrition, discipline problems, and declining morale within the Army as a whole.[16]

Most importantly, this downturn in the quality of recruits has also translated into difficulty in training soldiers. This is especially true in those specialties requiring the hands-on use of technologies, complex weapon systems, and information technologies. This trend is problematic for Army Transformation, which envisions all soldier specialties in the future as having these requirements. Major General Robert Scales, Commandant of the Army War College, lists such characteristics as high intelligence, maturity (well beyond 18 years old), technological savvy, physical toughness, and mental agility as requirements for the soldier of the future.[17] That seems to be a difficult set of traits to hope for in recruits from the ever-toughening job market of 2000 to 2020.

The divergence of these trends -- the Army's need for increasingly capable soldiers and the declining quality of recruits -- threatens to disrupt Army Transformation. Given these trends and the Army's current recruiting and training methods, can the Army adequately man the Objective Force*?* If the Army is to recruit, train, and retain a higher quality of soldier there may need to be a change in the system that does these tasks. On the other hand, if the Army needs to make substantive changes in how it recruits and trains, and is unable or unwilling to do so, then

Army Transformation must be adjusted from its current path. It must be tempered with the knowledge that the soldier of the future will be very much like the soldier of today. How will the Army react to this conundrum?

This monograph will first explore the likely environment of future conflict at the soldier-level. This will be done because the environment of the future battlefield will determine what skills and traits the soldier of the future should possess. What will the future demand of the individual soldier? What technologies and systems will the soldier operate on the future battlefield? How and with whom will he communicate? The answers to these questions will serve to set a "baseline" of required skills and traits of soldiers for the Army's individual recruiting and training needs for the next twenty years.

After determining these required skills and traits, this monograph will then proceed to investigate the Army's current process for recruiting soldiers. What is the recruiting trend over the past 10 years in terms of both quantity and quality? What will be the recruiting environment for the period 2000 to 2020? Are there any initiatives or plans to make a major change to the Army's recruiting program? Can the current program, unchanged, be used to recruit for the Army envisioned by Army Transformation? What do these past trends and current initiatives bode for the future of recruitment? The answers will provide critical insight into the Army's ability to provide the training base with qualified individuals.

After drawing conclusions about the Army's ability to recruit quality soldiers, the monograph will examine the post-induction training that readies soldiers for unit assignments. How are soldiers identified to receive training technology and complex systems? How is this process poised to adapt to recruiting the Objective Force Soldier? As systems and technologies become more complex, how will training take place? Are there any useful insights from the Army Experiment Program, the Digitized Divisions initiative, or the Interim Brigade Combat

Team (IBCT)? The answers to these questions will lead to conclusions about the readiness of the training base for future requirements.

Lastly, with all the facts in hand concerning our ability to recruit and train for the future, the monograph will compare the future needs of the Army with what it is likely to get from the recruiting and training systems of today. Are changes necessary? Will Army Transformation be stymied by an inability to place the technologies of the future into capable hands? If so, Army Transformation may be faced with yet unforeseen challenges.

CHAPTER TWO

THE FUTURE BATTLEFIELD

> War is a matter of state. It is the field on which life or death is determined and the road that leads to either survival or ruin, and must be examined with great care.[18]
>
> Sun-Tzu

In attempting to determine what will be required of the future soldier it is imperative first to explore the future battlefield. The characteristics of that future battlefield will determine what is expected from soldiers in the future. It is necessary to determine what types of weapons, systems, and technologies will proliferate in 2020 and beyond. After glimpsing future technology, future battlefield requirements, both in terms of what America expects of its Army and what the enemy will likely present, must be applied to that vision. Lastly, our emerging doctrine must be viewed in order to see how the Army currently sees the soldier acting on the battlefield of the future. LTG Paul Kern best summed up this process of determining how to envision the future battlefield when he stated that "one can … capture a qualitative glimpse of the future of land warfare by projecting technological trends through the prism of emerging doctrine and requirements."[19]

TECHNOLOGY

Developments in technology are both driving and being driven by Army Transformation. In the past military thinkers have been slow to appreciate fully the degree to which some technological changes would effect the future environment of conflict.[20] In the American Civil War the lethality of the rifled musket and the importance of prepared defensive positions surprised many leaders. In World War I the near-total dominance of artillery and machine gun fire over battlefield mobility was equally surprising to both Axis and Allied military planners. In World War II few theorists guessed beforehand that the aircraft carrier would relegate the battleship to a supporting role. These are but a few examples of how most military thinkers "got

it wrong" before a major conflict.[21] The Army seems determined to "get it right" this time. Military technological change trends in three categories – weapon systems, information systems, and other combat enablers (such as battlefield sensors) – show significant impending advancements that will significantly alter the battlefield environment.

WEAPONRY

Arguably, the most critical technological changes for the soldier are in weaponry. The Army Vision describes fires as the first, and most important, element of lethal combat power.[22] It is the weapon, above all else, that distinguishes the soldier from the noncombatant. It is the weapon that provides the threat of force and enables the soldier to achieve objectives using maneuver on the battlefield. It is also the weapon, with its effects, which drives battlefield mobility, survivability, and thus determine battlefield geometry and drive doctrine. The most evident trends in the development of modern weaponry are their increasing range, lethality, and accuracy; a greater degree of automation in weapon systems; and a greater freedom of use of supporting fires which allows their application further down the chain of command to more junior leaders and soldiers. In fact, The Army Vision, Joint Vision 2020, and the body of Army Transformation literature all seem to envision weapons systems that have a high probability of kill at extended ranges in order to offset increased vulnerability of the soldier. These trends in weapons development are having a considerable effect upon the actions of even the most junior soldiers on the battlefield, both in combat and during other operations.

Weapons have become increasingly more lethal over time due to increased range and precision.[23] This trend promises to continue. Mechanical and chemical developments in weaponry – such as rifling of guns and artillery and the invention of smokeless powder and high explosives – reached a near zenith toward the end of World War II. The breakthrough that achieved a quantum increase in weapon lethality was the development of the microprocessor.[24] Subsequent electronic developments, and the ensuing explosion in computer development, hailed

a new era of precision weapons. Computerization, coupled with more recent improvements in materials, such as lightweight composites and lasers, has created a number of deadly lethal and lightweight weapons.[25]

It is the infantry soldier who stands to gain the most from future advances in weapon system technologies. Four new easily air transportable items, the Javelin, the Follow-on Tow Missile (FOTT), the Line of Sight Antitank (LOSAT), and the Enhanced Fiber Optic Guided Missile (EFOGM) are all threatening to steal armor's open-field advantage and place it in the hands of the concealed infantryman.[26] Other advances in weapons systems being explored are "linked sensor-shooter" systems for indirect fires[27], the Land Warrior System, and helmet-mounted heads up displays directly linked to an improved, multi-armament individual weapon.[28] Added to these is a family of non-lethal weaponry to be employed in lower-spectrum conflicts.[29] All of these weapons systems, computerized and conceivably bristling with switches and controls, demand a warrior who is intelligent enough to be trained well and mature enough to handle the increased workload. This scenario is in contrast to today's infantrymen who generally operate direct-fire rifle, or perform as team members on a crew-served weapon while carrying a second personal weapon for contingencies or self-protection.

The last category of future weaponry is those that the soldier will not directly operate, but those he will be able to target and control from near the close battle. Improvements in satellite communications networks, high frequency radios, and military cellular networks all point to improvements in the ability of all soldiers to call in indirect fire, direct close air support, or direct other supporting lethal and non-lethal fires. Army transformation and emerging doctrine should be prepared to address the implications that this trend has upon the task load and skills of the junior soldier and leader.

INFORMATION SYSTEMS

General Shinseki sees "lethal decisiveness" as a core competency of the Army.[30] Central to that decisiveness is the concept of improved Information Operations. Improvements in gathering, processing and analyzing battlefield information will enable commanders to make decisions more quickly than the enemy can react. This qualitative advantage in information will confer an operational advantage to friendly forces and deny the enemy an unimpeded flow of information.[31] Improvements in information systems are thus the linchpin that holds Army Transformation together and makes that lethal decisiveness possible. Digitalization, automation, and networking of information systems are changing the very structure, and the tactics, techniques and procedures (TTP) of Army organizations. Improvements in these technologies, however, are not simply being made in division and corps command posts, but also in the systems that provide information to platoon leaders, squad leaders, and individual soldiers.

What kind of information systems can we expect to see down at the individual soldier level? DARPA is exploring a number of developments that will increase information flow to the soldier and from him to his chain of command. Radio frequency tagging will allow team and squad leaders to have better knowledge of the location of all soldiers in the team and squad. Helmet-mounted headsets linked to radios and networked within the team or squad will allow for more reliable communication from soldier-to-soldier or soldier-to-leader. Concurrently, DARPA is exploring whether battlefield sensors can be linked to these "soldier networks" to provide information overmatch at the team and squad level.[32]

OTHER ENABLING SYSTEMS

Central to the idea of information superiority is timeliness. The only way to increase speed of information flow is to minimize nodes and maximize the automation of that flow. This will be accomplished by developing an "Intelligent Information Grid."[33] The Intelligent Information Grid represents a seamless, powerful, and intelligent system of information systems, sensors, and relays that need minimum human interface. In order to accomplish this, Army

Transformation is developing concepts that will proliferate on the battlefield with a number of automated devices. These devices will include robotics, intelligent sensors, countermeasures, and automatically updating heads-up map overlays.[34]

REQUIREMENTS

MAJOR REQUIREMENTS

Two important requirements stand out in the body of literature on Army Transformation and overshadow all others: strategic responsiveness and full spectrum dominance. General Shinseki states that "we will transform the most respected Army in the world into a strategically responsive force that is dominant across the full-spectrum of operations."[35] The first of these two requirements, strategic responsiveness, means that the Objective Force must be able to deploy in larger numbers more quickly. In short, we must be able to deploy forces by air, forces with greater staying power and less vulnerability than light infantry. The second major requirement is what the Chairman of the Joint Chiefs of Staff calls "Full Spectrum Dominance,"[36] or the ability to conduct successful operations, or dominate, along the full length of the spectrum of conflict.

Strategic responsiveness demands combat systems that can make it to the battlefield in a much shorter time that can today's heavy tank forces. The 72-ton M1A2 Abrams tank and the M2/3 Bradley Infantry/Cavalry Fighting Vehicle (IFV/CFV) are simply too heavy and bulky to be deployed quickly given our limited strategic air fleet of C-17 and C5 transport aircraft. This will result in acquisition efforts for smaller and lighter combat systems that provide less protection from enemy fire. In order to offset this increase in vulnerability, detection of the enemy must be made at longer ranges and weapons must have increased lethality at longer ranges. Additionally, friendly forces must increase their own dispersion, thus increasing the need for quality command, control, and communications systems at the squad and platoon level.

Full Spectrum Dominance is a distinct change from the requirements of the Cold War. The Cold War U.S. Army was skewed toward fighting an armor war on the plains of Europe. Since the dissolution of the Soviet Union, the Army has been required to respond to more Stability Operations and Support Operations than ever before. It has become evident that the current force could perform these operations, but not optimally. The Objective Force must be prepared to respond to operations throughout the spectrum and dominate throughout that spectrum. The implication behind full spectrum dominance is that the soldier must be prepared to face a full-range of environments, not strictly or predominantly combat as is envisioned today.

OTHER REQUIREMENTS

Other requirements will be placed on the soldier of the future. These requirements come from two basic sources: the security environment and the American public. Regardless of where we would prefer to fight, the security environment determines where, when, and how the soldier is likely to be employed. Secondly, our own citizens levy other requirements. The American public seems to be changing what they traditionally expect from the American military. Collectively, these changes in requirements will significantly alter what is expected from the future soldier.

The security environment of the future will drive the time, place, enemy, and objectives of future conflicts. If the past is any indication, the Army will be involved in more conflicts at the lower end of the spectrum more often. The 1990s saw the Army involved in more numerous and wide spread operations than any other ten-year period before. The Army Vision states that the environment will be more "complex" and that "sources of conflict are increasing."[37]

Secondly, conflicts are increasingly taking place in areas that are witnessing the breakup of states and increases in tribalism, nationalism, religious conflict, and anarchical situations.[38] Terrorists, noncombatants, and third party actors become involved in the violence and are more difficult to identify. Examples of these conflicts in the past ten years are Somalia, Bosnia, Haiti,

Rwanda, and East Timor. These conflicts place unique demands on the skills of soldiers who in the past were predominantly trained for conflict. Third, as the U.S. gains a greater degree of tactical overmatch, adversaries resort more to asymmetrical attacks.[39] They increasingly use low observable technologies, camouflage, obscurants, and countermeasures to avoid U.S. strengths. The attack on the USS Cole in Yemen is an example of this type of asymmetry.

Another factor that will likely characterize future conflict is that much of the social unrest fermenting across the world is happening in urban areas. These areas, especially in Africa, the Pacific Rim, and the Middle East, are ripe for conflict. Robert Kaplan's eerie vision of the shantytowns on the West Coast of Africa offer up unsavory visions of conflicts that could easily consume western nations.[40] These urban areas, often the scene of cultural and racial turbulence, offer cover, concealment, and logistical support to terrorists and other asymmetrical players attempting to hide from conventional forces and authorities. Urban combat, a type of warfare no military enjoys having to perform, is complex, brutish, and costly.

Another body of requirements comes from the American public. First, America has become more adverse to casualties and to collateral damage. It is possible that U.S. experiences in Iraq, Bosnia, and Kosovo has led the American public to believe, falsely, that the U.S. can fight and win wars without casualties. Dr. Williamson Murray of the Army War College stated that Desert Storm gave the American Public the belief that technology and distant strike capability would always translate to few casualties "flies in the face of 3,000 years of accumulated military history."[41] Additionally, emerging globalism and increasing presence of the electronic media has made the American public more cognizant of and concerned with battlefield suffering. Put simply, U.S. soldiers must fight wars without getting killed and must not kill indiscriminately in war. These trends, coupled with America's unique position as a sole superpower, have created a unique situation in world history. Douglas Macgregor states that

> It is unnecessary for America's potential opponents to surpass the United States in military power. It is enough to make the cost of an American military victory so high in material and human terms that an American military victory would still dangerously weaken the United States' strategic position in the world.[42]

This means that soldiers must perform near-flawlessly on the battlefield, that they must be masters at identifying, targeting, and protecting. In short, American soldiers must get it right 100% of the time.

DOCTRINAL CONSIDERATIONS

Emerging doctrine plays an important role, perhaps the most important role, in determining how the soldier of the future will operate on the battlefield; emerging technologies and requirements placed upon the soldier make up only part of the picture. As Field Manual 3-0, *Operations*, replaces Field Manual 100-5, *Operations*, significant changes will take place in what we demand of soldiers in the future. Two of the changes, the addition of Information Operations as a separate battlefield operation system and full spectrum dominance, were already discussed previously. Other significant changes in emerging doctrine that could effect the soldier of the future are the trend toward Unified Action, the increasing emphasis upon Stability Operations and Support Operations, and, perhaps most importantly, a return to the dominance of Offensive Operations.[43]

UNIFIED ACTION

Unified Action is "the wide scope of actions…taking place within unified commands, subordinate unified commands, or joint task forces...under the overall direction of the commanders of those commands."[44] The doctrinal trend toward Unified Action means that the soldier of the future will more often be employed as part of a joint team and is more likely to see actors from other governmental and non-governmental agencies on the battlefield. When combined with a greater likelihood of participating in lower end spectrum operations, soldiers at lower grades could be forced more often to interact with non-governmental organizations (NGOs)

and private organizations (PVOs). That soldier is also more likely to be the subject of media interest and interaction in an environment where the results of media exposure could directly effect the success of the mission, the strength of coalitions, and American public opinion. More importantly, the very junior soldier and leaders of the Objective Force will be forced to act as "subject matter experts" when deployed as part of flatter and smaller joint, combined, and interagency teams.

STABILITY OPERATIONS AND SUPPORT OPERATIONS

A second major change in emerging doctrine is a relative increase in the importance of stability operations and support operations. Since 1990 the U.S. has become more involved internationally, as part of United Nations Operations (Somalia), as part of the North Atlantic Treaty Organization (Bosnia and Kosovo), and unilaterally (Rwanda and Hurricane Mitch in central America). This trend seems likely to continue. Where previous doctrine placed less importance these types of operations and rolled them up into Military Operations Other than War, the new FM 3-0 places more importance on these types of operations. Stability Operations (Chapter 9) and Support Operations (Chapter 10) each have their own chapter in the upcoming manual.

Stability operations can be characterized by the lack of a distinct enemy, by having a longer time frame to achieve goals, by changes in mission, and by being nonlinear and noncontiguous. Stability operations may also be conducted concurrently within combat operations. Importantly, these operations "place a greater demand at the small unit level."[45] Support operations involve less likelihood of conflict, but are similarly complex. Similar to stability operations, support operations place great demands on the skills and talents of the soldier. This is true because threats are difficult to pinpoint, lines of operation are similarly complex, and demands on small leaders are great. To add additional demands upon the skills and talents of the most junior soldiers, domestic relief operations and support to law enforcement both

fall under the rubric of support operations. By its nature, the domestic use of military forces is politically sensitive, thus requiring additional judgement and temperate behavior on the part of junior leaders and soldiers operating in widely dispersed areas.

DOMINANCE OF OFFENSIVE OPERATIONS

Current doctrine does not place as much initiative upon offensive operations as does emerging doctrine. From the mid-1970s through the Gulf War, U.S. Army doctrine centered upon an initial defense, with the counter-offense to seize the initiative. During the Gulf War, the Commander-in-Chief of U.S. Central Command took great risk with a rather thin defensive line until sufficient forces could be brought to bear for offensive operations. This phasing of operations was forced upon him because of the relatively slow and ponderous way that the U.S. deployed heavy forces from CONUS and the Europe. Emerging doctrine recognizes that this may not be possible on the battlefield of the future. Hence, both General Shinseki and General Shelton foresee an urgent need to develop more strategically deployable forces with sufficient combat power. Secretary Caldera terms it "more responsive formations" with "more lethality in that transformed force."[46]

The full return to the dominance of the offensive in the recent FM 3-0 has numerous implications for the battlefield of the future. First, soldiers and small unit leaders can reasonably expect less "train up" time before deploying to take part in combat, stability, or support operations. Combined with the concept of full spectrum dominance, this means that soldiers will simply be required to maintain tactical and technical proficiency in a wider variety of skills and competencies. Secondly, soldiers will have to show more initiative and aggression on the battlefield. Current Army culture, perhaps left over from the days of the "defense of Europe," expected the adversary to initiate combat. Lastly, the dominance of the offensive at greater standoff ranges simply leads to more complex operations. As the defensive is seen as the stronger form of war[47], and Transformation envisions engagements at longer ranges outside the

visual range of the enemy, offensive operations stand to become necessarily complex for soldiers and small unit leaders.

IMPLICATIONS OF THE FUTURE BATTLEFIELD FOR SOLDIERS

This chapter has thus far looked at new technology trends, emerging doctrine, and requirements placed on the soldier by the future battlefield and the American public. Each of these three areas has implications concerning the soldier of the Objective Force. If those implications are drawn out, it is possible to determine a list or set of skills, traits, and competencies that will be required of soldiers in that Objective Force. From this, a comparison can be made concerning whether or not the Army is poised to recruit and train that soldier after 2020.

IMPLICATIONS OF TECHNOLOGY TRENDS

Improvements in technology will have a number of effects on the battlefield, each with its own implications for the future soldier. The first effect is that the battlefield will expand as forces are detected and weapons are effectively employed outside of visual or aural range.[48] Battlefield dispersion in the future will increase dramatically. This has both positive and negative effects. It means that forces will be able to mass fires without having to mass troops.[49] This increase in dispersion, however, also means that the requirement for mobility at even lower levels of command will increase.[50] The second effect of this qualitative increase in technology is that forces will become more vulnerable. This means that the enemy will more easily be able to target and destroy relatively immobile friendly combat support and combat service support nodes. This effect, coupled with decreases in crew and clerical requirements allowed by automation and reachback, will allow for flatter organizations with more overall mobility.[51] Unfortunately, greater vulnerability and the resulting decrease in logistical footprint will also add to the administrative and logistical decision-making burden of relatively junior leaders. Lastly, improved communications and the proliferation of information operations as a separate battlefield

operating system will shorten decision cycles, increase the tempo of operations, and place greater demands on the initiative of soldiers and leaders.

What do the implications of future technology have upon the skills of our future soldiers? Most importantly, the proliferation of sophisticated weaponry, networked communications systems, and the ability of the most junior soldier to control fires demands a great level of intelligence, computer literacy, and maturity. Major General Scales stated that technological changes demand soldiers who are skilled in multiple areas, who receive leader education at a earlier age, and who are qualitatively "better" in the areas of intelligence, maturity, psychological fitness, and physical toughness.[52]

IMPLICATIONS OF CHANGES IN REQUIREMENTS

The two major changes in the requirements placed upon future soldiers are that he be part of a more rapidly deployable force and that those forces possess "full spectrum dominance." Each of these two requirements has similar implications concerning what kind of soldier must man the Objective Force. First, more rapidly deployable forces must be ready to go at any time. This means that long training periods and mission readiness exercises (MREs) will not be available. It also dictates a higher level of medical, personal, and family readiness for soldiers. These two requirements are akin to those placed upon the divisional ready brigades of the 82nd Airborne Division and the 101st Airborne Division (Air Assault) or the 75th Ranger Regiment. A secondary effect is that a higher operational tempo (OPTEMPO) may adversely effect a soldier's desire to serve in these type units. Therefore, these soldiers must be more highly paid and afforded more rapid promotion and advancement than their contemporaries of today.[53]

Full spectrum dominance dictates similar requirements. Soldiers who are required to obtain and maintain skills across the full spectrum of conflict must be highly trainable. These soldiers must also be afforded a greater amount of "protected" training time in which to master these skills.[54] Training OPTEMPO in most units is currently interrupted by a proliferation of

taskings and is subject to the vagaries of budget shortfalls. It is unlikely that all of these distractions will go away. Therefore, there is no escaping the demand for intelligent, mature, and fit soldiers in the future.

Other requirements place similar demands upon the soldier of the Objective Force. The increasingly complex security environment of the future will task the judgement of the most junior soldier. Stability operations bordering on combat are likely to include complex political situations coupled with convoluted rules of engagement (ROE). Non-state actors, terrorists, and asymmetrical threats pose even more complicating factors on the future battlefield. Lastly, casualty aversion on the part of the American public and/or political leadership will place greater demands on the young soldier and leader to make no mistakes. As before, these requirements also demand more maturity, greater intelligence, mental toughness, and a high degree of judgement.

IMPLICATIONS OF DOCTRINAL SHIFTS

Changes in U.S. Army doctrine threaten to change what is expected from soldiers. As a bellwether, the draft FM 3-0 indicates the doctrinal changes that are soon going to occur across the Army. The effect that changes in information operations doctrine and full spectrum operations doctrine will have upon future soldiers has already been discussed. However, the greater emphasis placed upon unified action, stability operations and support operations, and offensive operations will also effect what is expected from soldiers in the future. Each of these doctrinal shifts must be studied to see what insights can be gained at the soldier level.

Unified action will lead to soldiers more frequently fighting as part of a joint team and in conjunction with NGOs and PVOs. Traditionally, soldiers in AirLand Battle doctrine fight as part of a large tactical army organization and have little contact with these various non-army actors. In the future, young soldiers will be exposed to government officials, PVO workers, and the media on a more regular basis. This translates into a need for more mature soldiers

possessing good judgement and a great deal of confidence and self-discipline. It could also lead to situations where dispersed formations render very junior leaders as "subject matter experts" when dealing with these non-army players.

This trend toward greater doctrinal emphasis on stability operations and support operations poses similar demands on the skills of future soldiers. Again, greater demands will be placed on smaller organizations, and therefore on junior soldiers and leaders. As complex operations with confusing lines of operations and nebulous threats, stability operations and support operations demand intelligent, patient, and confident soldiers who work well in isolation from larger units.

Most importantly, our doctrine is shifting emphasis away from defense/counter-offense to taking an early and aggressive offense. This basic shift in doctrine for combat operations places perhaps the most difficult demand on the future soldier. The offense requires soldiers demonstrating initiative, boldness, and good judgement. Strong emphasis on the offense also requires soldiers who can be more easily trained, who retain what they have learned, and who understand the increasing complexity of the offense against an unknown enemy. In short, it requires a bit of the "coup d'eoil" of which Clausewitz spoke.[55]

CHAPTER 2 CONCLUSIONS

Army transformation is a bold and imaginative program to change the U.S. Army for the environment of the future. Concentrating on precision engagement, dominant maneuver, and decisive information operations, the Army seeks to use tomorrow's technology to field a lethal, strategically deployable force to dominate the future battlefield. However, the Objective Force will be vastly different from the one that we currently have. It will be technologically very complex, employing systems of systems networked and dispersed across the width and depth of the battlefield. It will bristle with highly lethal technologies, such as weaponry, communications, and information systems. The units that will fight on this battlefield will be small, highly mobile,

and have a "flat command structure, allowing substantial initiative at the squad and platoon level."[56] *The Army After Next Compendium*, published at the Army War College, summed up best what will be required by soldiers on that future battlefield:

> Technological advances in the C4I arena and the correlative changes in doctrine, training, and leadership also point to that small, elite force composed of multi-functional soldiers or integrated combat arms formations. Either case demands the multi-skilled, highly mobile, and independent warfighter, linked to other platforms, who may be fighting more often in cities and suburbs than on open hills.[57]

What does this view of the future battlefield bode for the soldier of the Objective Force? As has been shown, changes in technology will expand the battlefield and evolve flatter organizations with more junior leaders possessing greater responsibilities. The logistics footprint will shrink as soldiers are forced to take on a greater share of their own support tasks. As the requirements of the battlefield change, soldiers will also deploy more rapidly and may be required to respond to a wider spectrum of operations. They will also be expected to suffer few casualties, minimize collateral damage, and dominate complex situations in which the enemy may be hard to pinpoint and threats difficult to discern. On this battlefield, the actions of junior soldiers could have a great effect on strategic considerations. Lastly, doctrinal changes stress the offense, make for smaller task-organized/joint teams, and more frequently place soldiers in stability or support operations.

In short, the soldier of the Objective Force must be different from the soldier of today and the Army will likely be forced to toughen recruiting standards. Because the average soldier of 2020 must be more highly intelligent and computer literate, it is possible that soldiers without at least some college or technical training may not meet this expectation. Also, soldiers who score in the low end of screening tests may not be able to acquire the skills of the future Army. Next, the level of maturity and judgement required will come from older soldiers. This may mean that the Army should recruit soldiers

closer to the age of twenty-one than eighteen. Lastly, soldiers of the Objective force must demonstrate leadership, initiative, and aggressiveness.

This last set of traits may be the hardest to find; they may be found in individuals who have proven these capabilities in ways other than by scoring high on testing or achieving high grades in school. Some possible determinants of these skills could be success in sports, demonstrated leadership in youth organizations, involvement in volunteer work and demonstrated skills in the arts. In the words of Major General Robert Scales, "soldiers and their units will require higher levels of mental agility and psychological resilience to successfully meet tomorrow's battlefield challenges."[58]

CHAPTER THREE

RECRUITING SOLDIERS TODAY AND TOMORROW

> As more and more impact has gone into the hitting power of weapons, necessitating ever widening deployments in the forces of battle, the quality of the initiative in the individual has become the most praised of military virtues.[59]
>
> S.L.A. Marshall

The most important question that can be posed about manning the Objective Force is: can the Army effectively recruit quality soldiers in 2020? To answer that question it is vital to explore how well the Army has been recruiting recently. To that end, this monograph will examine three areas: today's recruiting effort, the challenges of recruiting tomorrow, and the Army's reaction to that challenge. An examination of the Army's recruiting efforts in the 1990s will be done to determine if the "machinery" that recruits soldiers is capable of meeting the needs of the Legacy Force. The next important step is to look at trends in the recruiting base, the youth "market" and the conditions that effect recruiting to determine if Army Recruiting Command (USAREC) is looking forward to the Objective Force envisioned by Army Transformation. These trends will demonstrate the challenges that effect the Army's ability to man the Objective Force. Lastly, what efforts and initiatives will build upon today's recruiting effort? By exploring these three areas conclusions can be drawn concerning whether the Army is poised to man the Objective Force or if changes need to be made in that long-range effort.

Before beginning this exploration, however, two important recruiting concepts must be discussed: quantity and quality. The first concept, quantity, is simply the number of recruits to be recruited. The second concept, quality, is more difficult to define. What is a "quality" recruit? This is indeed a difficult question to answer because of a number of factors. First, there is a long time lag between recruitment and the final "testing" of a soldier's skills. Next, without exposing soldiers to combat, only surrogate methods of evaluation may be used. Also, there is a difference between what is evaluated in young recruits and privates (raw task performance) and what is evaluated in young sergeants (leadership and initiative). Lastly, the number and complexity of

tasks to evaluate grows as a soldier stays on active duty.[60] The Government Accounting Office (GAO) estimates that it takes four years to measure the full effectiveness of recruiting efforts against a particular "recruiting class."[61]

For the purpose of this study an assumption will be made that the Army's current primary measure of quality, namely performance on the Armed Services Vocational Aptitude Battery (ASVAB) and Armed Forces Qualification Tests (AFQT) combined with education level, is effective in determining recruit quality.[62] This assumption is made because the purpose of this study is to draw general conclusions concerning the Army's overall ability to recruit for the Objective force. Additionally, this study also assumes that there is a general causal link between poor quality of recruits and subsequent reenlistment rates, training failure rates, and rates of indiscipline and/or criminal behavior. This assumption is made to draw conclusions concerning the overall effects of poor recruit quality on the ability of future small tactical units to meet the challenges of the future battlefield.

ARMY RECRUITING PERFORMANCE

How well is the U.S. Army recruiting soldiers today and since the end of the Gulf War? How well can we expect to recruit into the years of the Objective Force? Four areas must be explored in order to answer these questions. First, how many soldiers has the Army been able to recruit over that past ten years compared to its needs? Second, what has been the "quality" of these recruits? Third, how has the Army been able to retain and reenlist these soldiers? Retention, although not a reenlistment issue, is directly related in a number of ways. This will be explored. Fourth, what has been the cost of recruiting? Has the Army changed, in any significant way, the amount of attention or resources that have gone into recruiting? The answers to these questions will provide information concerning the basic health and fitness of the Army's manning infrastructure.

RECRUITING BY THE NUMBERS

It should come as no surprise to most readers that the U.S. Army has had a difficult time recruiting since 1990. This difficulty in recruiting new soldiers is particularly exasperating in light of the reduction in the size of the Army during that time. From a post-Gulf War high of nearly 800,000 authorized soldiers, the size of the active component has shrunk to less than 490,000. Even with this reduction of almost 40% in the size of the force, the Army has still had significant trouble meeting recruiting goals.[63]

For a number of reasons, analyzing the Army's recruiting effort can be difficult. Changes over time in the Army's end-strength complicate any numerical analysis of the recruiting effort. For example, during the draw down, the Army had the luxury of virtually ignoring the need to reenlist in great numbers as the total force size decreased. Further complicating any analysis is the fact that the Army's numerical recruiting goal changes. To set a goal, the Army compares authorized end-strength to re-enlistment rates and recruit washout rates. Unfortunately, these numbers must be predicted. The Army first projects loss rates and then sets a recruiting goal. If soldiers reenlist or recruits washout at other than projected rates, USAREC will be handed a change to that recruiting goal late in the year. Slight changes in these rates could dramatically change recruiting goals. The last complicating factor is the recruit washout rate itself. Over time, recruits may tend to washout at a lesser or greater rate than can adequately be predicted. For example, the Army projects that it takes approximately three candidates agreeing to take the ASVAB for every soldier completing basic training. In 1993 235,000 youngsters took the ASVAB leading to 77,000 entering active duty.[64]

In general terms, the Army recruiting has not been highly successful over the past decade. Young America's post-Gulf War military honeymoon coupled with the economic recession of the early 1990's likely helped the Army from 1990 through 1993 to meet recruiting goals. The Army then failed to meet recruiting goals for seven straight years between fiscal years 1993 and 1999. In 1998 the active Army fell short 750 recruits, while that figure jumped to an astounding 6,300

in 1999. For fiscal year 2000, the Army forecasts meeting its goal of enlisting approximately 80,000 soldiers.[65] However, a number of unusual factors this past year point to continuing difficulties in making this upward trend last.

The first reason why the Army may not be able to easily continue an upward trend is that the Defense Department's advertising budget has continued to grow in the 1990's from $70 million in 1993 to an all-time high of $265 million in 2000. Counting upon continuing budget support for marketing may not be prudent in light of political uncertainty and wrangling over the balanced budget. Also, the Army may fast be approaching the diminishing point of returns of marketing. The second reason is that the Army instituted a number of short-term initiatives that may have masked an eighth straight year of recruiting failure. These initiatives included unprecedented cash bonuses, a full-scale public relations campaign, and implementation of a "stop-loss" order to freeze recruiters in place from June through September of 2000.[66]

QUALITY CONTROL

The AFQT is actually a subset of four verbal and math sub-tests of the ten-subject ASVAB. AFQT scores are categorized in five categories, equating to the top eighth percentile (CAT I), the top ninth through thirty-sixth percentile (CAT II), the top thirty-seventh through seventieth percentile (CAT III), the top seventy-first through ninety-first percentile (CAT IV), and the bottom ninth percentile (CAT V). CAT V candidates are not eligible to enlist by law. High school graduates must score in mid-CAT IV range or higher and score high (eighty-five) in at least one sub-test to enlist. GED holders must score in CAT III range and score high in at least one sub-test to enlist. Non high school graduates must score in CAT II range and score high in at least two sub-tests to enlist. The Army prefers to enlist as many recruits as possible from the mid-CAT III range on up because they statistically perform well academically in training.[67]

The Army periodically sets ceilings on the number of CAT IV soldiers who may enlist each year. This figure had been almost 10 percent from 1984 to 1987 and five percent from 1987

to 1992. In 1992 the Army succeeded in keeping CAT IV soldiers to less than one percent of the recruit population.[68]. Throughout the 1990s the Army managed to keep CAT IV recruits under the one- percent figure. Then, quality trends began to shift. Faced with difficulty meeting recruitment goals in the mid-1990s the Army made substantive changes to recruit quality standards. First, in 1997 the Army changed its allowance for non-high school graduates from five percent to ten percent of recruit population. Second, the Army relented on its goal of keeping CAT IVs at less than one percent of the total recruit population. Third, in 1998 the Army agreed to allow home-schooled applicants, who had previously held the equivalency standard, to be treated as high school graduates.[69] In effect, this move allowed recruiters to lower the ASVAB score standard required of "home-schoolers," thereby enlisting more of them. While there is no record that home schooled applicants are of lower quality than high school graduates, any lowering of standards is bound to lower, to some degree, the overall population quality.[70]

More of evidence that the Army is suffering a general decline in the quality of recruits can be found in research being conducted by USAREC's Office of Program Analysis and Evaluation (PA&E). USAREC PA&E estimates that overall quality, as a measure of education level, AFQT scores, and a variety of other smaller indicators of recruit quality, held steady from the time of the Gulf War, increased slightly during the draw down, and then began to fall sharply in 1997.[71] The trend in overall recruit quality, as viewed by USAREC's strategic research arm, is therefore in an unabated downward spiral

ATTRITION AND REENLISTMENT PROBLEMS

Another significant part of the Army's ability to man the force is attrition and reenlistment. The Army appears to experience problems retaining soldiers during their first term of service (first term attrition) and getting them to reenlist for a second term of service. The Army does not seem to experience difficulty with retaining senior NCOs, likely because of the stiff competition for advanced NCO rank as the rank structure pyramids. Where the Army

historically has trouble in retaining manpower is during the initial period between enlistment and the end of the first enlistment term. Recruit washouts rates and first term attrition are increasing while reenlistment rates are decreasing.[72] Both of these areas have been especially problematic to the Army's manning effort in the 1990s. While the Army has always made efforts to minimize these manpower losses, difficulties in recruiting young Americans have exacerbated the problem.

The process of taking recruit candidates from the recruiting station to unit assignment is a long and convoluted process. There are no less than ten decision points along that process where a recruit may washout of the process.[73] Recent trends show that these washout rates are increasing at specific points along the process. First, propensity to serve has decreased. Young people are simply less inclined in the year 2000 to serve in the military.[74] Fewer youngsters seek out recruiters or respond positively to recruiting efforts than in previous decades. Second, more and more recruit candidates are having difficulty meeting physical standards, especially weight standards. This may be because the population as a whole is becoming less fit. Nearly twenty-five percent of enlistees from across the services who left during their first term in 1999 left due to physical or medical problems.[75] Third, more recruits who enter under the Delayed Entry Program (DEP) are washing our prior to entering service. Lastly, overall washouts from basic and advanced training are increasing. Army first-term attrition was up continuously in the 1990s, from 30 percent in 1990 to 39 percent in 2000, with an especially sharp increase occurring in the first six months of service.[76]

Also problematic for the Army is the rate at which soldiers leave the service at the completion of their first enlistment period. The Army depends upon a large percentage of enlisted soldiers, especially those in technical specialties, to reenlist. According to the Department of Defense "the services still have trouble keeping maintenance technicians, intelligence analysts, communications/computer operators, linguists and air traffic controllers," despite the recent reenlistment upswing.[77]

Although the Army has generally met aggregate reenlistment rates in the 1990s, two factors may be hiding a growing reenlistment problem. First, the Army is losing its high-technology soldiers at a greater rate than soldiers in non-technology based MOSs.[78] Soldiers in the second category can reenlist over the quota for their specialty if they agree to change MOSs. This problem can – and probably does – hide a growing gulf in experience among the second-term soldiers in those technical MOSs. Second, the Army has had to increase dramatically reenlistment bonuses and other incentives to enable the reenlistment of these soldiers with technological training or those willing to change specialties.[79]

FUTURE CHALLENGES OF RECRUITING

The year 2000 may prove to be the turnaround point for Army recruiting efforts. There are problems, however, looming over the Army's efforts in the first decade of the next millenium. The economy continues to be healthy, despite economic problems in other parts of the world. There are no signs that the economy will shift downward and increase labor pool of available young people. Exacerbating this is the decline in the population of young people as we move toward the Objective Force. There is also the declining propensity to serve among young people.

The U.S. economy is experiencing one of its longest and strongest periods of sustained growth ever. Youth unemployment is at a twenty-two year low of less than twelve percent.[80] The misery index – the unemployment rate plus the inflation rate, usually viewed as a measure of the public's perception of the strength of the U.S. economy – is nearing a thirty-four year low of six percent.[81] Further complicating this is the U.S. economy's shift away from service and manufacturing to information and automation businesses. These are the very companies whose growth and strength are a threat to enlisting and retaining soldiers with technical skills and potential.

The available pool of young people to recruit among is declining as well. USAREC estimates that as "Generation X" gives way to "Generation Y" and the "Net Generation," the

prime age group, seventeen to twenty-one year olds, will decrease from 1.9 million in 1998 to 1.4 million in 2000, before slightly rebounding to 1.7 million in the year 2010.[82] A decline in the raw number of candidates from whom to recruit makes USAREC's job of making initial contact extremely difficult.

Making the number of recruit candidates virtually smaller is the decline in the propensity of young people to serve in the Armed Forces. Lieutenant Colonel John Mikula, in an Army War College study, showed a decrease in interest level from seventeen percent at the end of the Gulf War to eleven percent in 1999. Mikula cited a number of reasons for this decrease: a drop in the number of World War II veterans in contact with young people; sociological effects caused by an increased standard of living; a change in the values of young people making them feel less obligated to serve; and an increase in what young people expect from employers – namely, higher pay, less work hours, and more personal time.[83] USAREC points out that more high school graduates are attending college. College attendance has gone from 50% of high school graduates in 1974, to 60% in 1990, to 65.6% in 1998.[84] One last factor that effects propensity to serve negatively is a decline in endorsements from active duty soldiers. The Army Times cited a War College survey that pointed out a discernable trend in the number of active soldiers who would recommend that a friend or relative enlist.[85]

MEETING THE FUTURE CHALLENGES OF RECRUITING

Recruiting efforts in the past decade have not been highly successful. The Army has had trouble meeting end-strength and has sacrificed quality, to some degree, in order to meet that end-strength. Additionally, it is likely that recruiting conditions will grow more difficult just as the Army begins its transformation effort. What is the Army doing to confront this problem and to man the Objective Force properly? First, the Army is developing a strategy to man the Objective Force. Second, the Army has already begun making changes to how and where it recruits and is also changing the way that it markets the Army to young people. Lastly, the Army is attempting

to "reconnect" with the American people, an admission that there is a gulf between the Army and the American people.

USAREC calls the Army's long-range recruiting plan "A Strategic Plan to Man the Army of the Future." There are four steps to USAREC's plan. Step one is to look at Army Transformation and define personnel needs for 2020. The second step is to identify the demographic, economic, and societal trends that will evolve over the next twenty years. The third step is to redesign a concrete recruiting infrastructure that achieves goals. The fourth, and final step, is to build adaptability into the plan in order to handle uncertainty.[86] This plan is based upon a solid understanding of Joint Vision 2020, the Army Vision, and many of the other future warfare studies taking place both in and out of the Army. Key to this strategic recruiting plan is an acknowledgement that the Army must shift its target population to slightly older, more educated, and more technically savvy recruits.[87]

The second way that the Army plans to meet the future recruiting challenge is shown by recent initiatives the Army has already implemented. First, the Army has recently restructured its recruitment locations. USAREC has moved recruiters from unproductive large city stations to open up 105 new recruiting stations and moved eighty-eight other stations to "service untapped populations." USAREC has also co-located a number of recruiters with ROTC departments on college campuses to take advantage of the older and more educated students who may need funding for college and will sign a delayed entry contract in exchange for tuition help. Lastly, the Army has implemented partnerships with industries to guarantee soldiers civilian employment at the completion of their enlistment periods.[88]

The third initiative the Army already has begun is a series of formal and informal programs to "reconnect" America to the U.S. Army. Fort Leavenworth's "Service to the Nation Program," sending Command and Staff College Students out to brief student and civic organizations on their Army experiences, is an example if one of these programs.[89] USAREC, in

conjunction with the Army Chief of Staff's Office, has begun a number of initiatives aimed at exposing the youth market to the Army. Some examples of these initiatives are sponsoring sporting events (such as a NASCAR racing team), a recent lottery giving winners a chance to do adventure training for a day, sponsoring of air shows, and gaining more exposure on the Internet through web site hosting.[90]

CHAPTER 3 CONCLUSIONS

The post-Cold War period has been a difficult time for manning the Army. The draw down of the active force and the anticipated peace dividend quickly gave way to a period of recruiting stagnation and repudiation of service in the eyes of many young people. The result has been a force that has barely met end-strength while having to relax quality standards to do so. Meanwhile, washout rates of recruits, first-term attrition, and failure to meet reenlistment goals in technical MOSs have also served to leave the Army in a manning crisis. In is in this context that the Army began the process of Army Transformation.

The U.S. Army's recruiting problem is unlikely to abate soon. The U.S. economy is healthy, a fact that will probably continue into the near future. This will translate into high levels of employment. Meanwhile, demographics are threatening to decrease the pool of available youngsters from which the Army traditionally recruits. Further exacerbating the recruiting problem is a decrease in the propensity of young people to serve in the military. Young people have other alternatives, have less of a connection to the U.S. Military, and are more prone to go directly to college after high school.

Fortunately, the Army and USAREC are not ignorant to the looming recruiting crisis. USAREC has begun framing a strategic plan to transform the recruiting effort in line with Army Transformation. More immediately, the Army has already made changes, such as moving recruiters out of metropolitan areas into less saturated markets, recruiting online, recruiting at colleges to find more educated and computer literate candidates, and teaming with industries and

business to guarantee recruits future employment outside the Army. Lastly, the Army has begun to recognize that it has become remote from the society it serves and is seeking to reconnect through a broad public relations campaign aimed at young people and society in general.

CHAPTER FOUR

TRAINING THE SOLDIER OF TOMORROW

> Training requirements for Army After Next Forces will be greater than the already heavy burden that exists today. Simply put, the contingency-focused Army of 2025 will have more missions, environments, threats, and partners for which to prepare.[91]
>
> The 1998 Annual Report on
> The Army After Next Project
> To the Chief of Staff of the U.S. Army

Recruiting soldiers is but a small part of the process of manning the Army. An equally difficult part of that process is conducting entry-level training for individual soldiers in order for them to arrive at their first units fully prepared to integrate into the unit as a functioning combat team member. Both the vision of the future battlefield at the soldier-level and the direction of Army Transformation examined thus far have shown a demand for soldiers in all skills and MOSs with a high level of technological competence and independent judgement. If the U.S. Army is to develop a more strategically responsive force for the dynamically changing battlefield in twenty years, an examination of the processes of selecting recruits to receive high-skill training and providing that training is required.

Three parts of the selection and training process represent critical nodes at which decisions and actions must be taken. First, from among the pool of recruits that the Army screens each year, a decision must be made concerning what specialty or MOS in which to place each individual soldier. Placing a soldier who is incapable of or unsuited for a high-technology MOS cannot easily be corrected later and normally leads to wash-out, first-term attrition, or other individual soldier failures.[92] The second critical node occurs when the soldier is trained in the basics of his MOS at Advanced Individual Training. The last of the critical nodes occurs when the soldier is placed on orders and integrated into his first unit of assignment. A critical look at these three nodes and how Transformation can alter them will provide vital information

concerning how ready the Army is to man the Objective Force with a highly fit, skilled, and ready warrior in 2020.

IDENTIFYING AND SELECTING HIGH-SKILL SOLDIERS

Predicting what type of soldier will perform well in a given high-skill specialty or an MOS requiring a high level of technical competence is more art than science. More to the point, developing an acceptable indicator of performance in any specialty is difficult at best. Complicating this difficulty is the fact that the Army is more concerned with trainability than intelligence, per se. Additionally, the Army is concerned with attrition as well, and attrition and trainability are not necessarily related.[93] Generally, however, soldiers are selected for an MOS based upon individual scores in the ten sub-test areas of the ASVAB.

The process for selection is quite complex. The Army reviews recruit ASVAB scores periodically and classifies soldiers based upon needs of each career field, availability of training slots at Army schools, and the scores of recruits in the classification pool. Each MOS career field sets minimum scores in individual sub-test areas of the ASVAB as requirements for that field. Most career fields strive to set higher standards to insure ease of trainability and successful performance, but some MOSs can be performed well by soldiers in the lower tiers of ASVAB scoring.[94] As a result, the Army adjudicates the career field ASVAB score requirements in order to keep high potential soldiers assigned to career fields requiring those recruits. The individual recruit's preference is also considered, but the recruit, as a condition of enlistment, frequently makes his or her enlistment decision contingent upon career field availability.

Overall, the Army has a good process and mechanism for classifying soldiers and "placing the round peg in the round hole." However, this process poses problems for classifying recruits for the Objective Force. The first problem is that the combat arms specialties have traditionally been viewed as not requiring high scores in the ASVAB. MOS 11B (infantryman), for example, currently accepts near-minimum scores on the ASVAB, as long as a soldier meets

minimum enlistment standards. However, the physical prerequisites for 11B are much greater than for MOSs requiring high ASVAB scores, such as 98G (Linguist). This bias could be problematic if standards in the future do not reflect the new demands of the Objective Force Combat Soldier, demands that make both high physical as well as high cognitive demands upon the soldier. In short, there could be a greater competition across the board for recruits who are viewed as being high caliber.

Another apparent problem is that the Objective Force may require from recruits traits that simply cannot be predicted using ASVAB scores, fitness test scores, and high school graduation status. For example, the expansion of the battlefield and the flattening of command structures will demand soldiers who display leadership and initiative; these traits cannot easily be predicted, much less identified. Alternate methods for identifying soldiers who perform well in isolation, have a predilection to lead, or possess good spatial orientation skills may need to be developed or identified.

TRAINING AND INTEGRATING THE HIGH-SKILL SOLDIER

In order to evaluate how well the army trains high-skill soldiers requires a bit of prognostication. This is because today's highest technology MOSs usually involve actions removed from tactical units and missions. For example, high technology skills in the medical field predominate in the echelons above corps (EAC), level IV medical treatment facilities.[95] Another example is soldiers performing maintenance and rebuilding of computerized aviation components. These soldiers are normally assigned to Theater Support Command repair facilities.[96] The majority of skill training for these example MOSs are conducted in remote, near-classroom settings or in conjunction with civilian, college, or industry training programs. This training does not exemplify the high technology and tactical warfighting training mix that will predominate the training of the Objective Force. Therefore, it is vital to examine the Army

Experiment Program, the Digital Force, and Interim Brigade Combat Team Training efforts to discover how the Army is prepared to train and integrate new soldiers in the Objective Force.

THE ARMY EXPERIMENT PROGRAM

The Army Experiment Program is a nearly seven year old series of experiments designed to determine how the Army is leveraging new technologies for the Information Age.[97] The Army is currently involved in Army Experiment Seven, with the six previous experiments having occurred from 1994 until 1999. TRADOC had the program lead, with The U.S. Army Simulation, Training, and Instrumentation Command (STRICOM) as lead integrator of the U.S. Army's and various contractors' efforts.[98] A review of the six previous Army Experiments' after action reviews and a review of the mission and goals of Experiment Seven show little work on the integration of technology at the individual soldier level. Army Experiment Four, conducted in 1997, included a dismounted battlespace battle lab experiment at Fort Benning, Georgia, but only down to platoon-level, not at the individual soldier-level.[99] Because of that, few pertinent lessons concerning training the individual soldier of the Objective Force can be drawn from the Army Experiment Program.

THE DIGITAL DIVISION – FORCE XXI

When the Fourth Infantry Division (Mechanized) unveiled its division colors at Fort Hood, Texas for reactivation in December 1995 it embarked upon one of the most important initiatives in the process of Army Transformation. The Division was soon named to become the first U.S. Army Division to digitalize; it transformed from an analog to a digital command, control, and communications infrastructure.[100] For five years the Division has tested and experimented with concepts for integrating technology with weapons systems in an attempt to enhance its warfighting capability.[101] This unit is one of the precursors to the Objective Force; it represents how the Army views transforming the command and control process. However, most

of the lessons drawn from the Fourth Divisions experiences are not valid at the individual soldier level.

The Fourth Division has had tremendous success at integrating high technology systems into units. However, the majority of that new technology has been concentrated at information gathering and sensor technology. Most of the Division's technology infusion has been in four systems: the Hunter Unmanned Aerial Vehicle (UAV), the Guardrail Common Sensor (GRCS) Aircraft, the J-STARS Aircraft, and the Counter-fire Radar.[102] These systems, combined with the Advanced Field Artillery Tactical Data System (AFATDs) linked through new digital command and control technologies, have had soldier-level impact only upon selected soldiers, mostly those operating in command posts and headquarters units. These technologies have had limited impact on the training requirements of infantrymen and tankers.

Some lessons concerning the training of soldiers in the future can be drawn from the Fourth Division's experiences. According to the Division's Chief-of-Staff , G3, who analyzed these lessons, the Division must have a comprehensive *digital* training strategy. To do this, the soldier must have firm foundation of analog skills upon which to build. Secondly, the soldier must have access to a number of training aids, simulators, and devices to support training. This is true, according to the G3, because digital skills tend to deteriorate more rapidly than analog skills. A final point drawn from the G3's analysis is that digital units require more frequent training as a result of the high rate of decay of digital skills.[103] To this end, Fort Hood, Texas has developed a Soldier Development Center filled with an array of digital training devices, distance learning classrooms, and a digital tactical operations center as a virtual "University of Mounted Warfare."[104] In short, the Fourth Division's experience points to a greater need for training time at more frequent intervals and more frequently done in realistically simulated or live conditions.

THE INTERIM BRIGADE COMBAT TEAM

Probably the most important place from which to draw lessons concerning the training of individual soldiers are the experiences of the Interim Brigade Combat Team (IBCT). Shortly after taking over as the Army Chief of Staff, General Shinseki announced that two brigades located at Fort Lewis, Washington would be designated the first units of the Interim Force. Thus, the 3rd Brigade, 2nd Infantry Division and 1st Brigade, 25th Infantry Division (Light), are being converted to IBCT organizations. Major General James Dubik, TRADOC's Deputy Commanding General for Transformation, admits that the human part of transforming the IBCT – and the Army as a whole – is more difficult than the materiel part. By this, he means that developing the new doctrine, tactics, and training are the more difficult processes.[105] The efforts of these two Fort Lewis units are already providing good, hard data on how training must transform with the Army.

The most readily apparent lesson from the IBCT's efforts is that small units are operating in larger battlespace, separating small units from their leaders. This, in turn, is forcing junior leaders, and even individual soldiers, to make decisions normally deferred to senior NCOs and officers.[106] As a result, soldiers and junior NCOs are being forced to understand better the orders process and to be able to execute mission-oriented orders based upon the commander's guidance. In the IBCTs there is a premium on soldiers who can react to changing situations with initiative. In short, leadership skills must be trained to soldiers earlier in their careers and continually developed in these units.

The second important lesson drawn from the IBCT is that soldiers must multi-task. As the IBCT has developed information gathering and sensor systems at the squad- and platoon-levels, there is simply more to do in the combat unit.[107] This factor, combined with the expansion of the IBCT's footprint, means that the platoon and squad is now further removed from the units base of operations. As a result, the average soldier must also take on a greater share of his own support. This means that soldiers in the IBCT must be cross-trained in lifesaving and basic

maintenance of light vehicles, weapons, and sensors. It also means that soldiers must train on the methods of calling for fire support and exercising judgement when deploying an ever-increasing range of supporting fires. This responsibility was formerly the purview of platoon leaders and above.

The last lesson learned from the IBCTs is identical to that learned by the Fourth Infantry Division, namely that skills in the digitally and technically enhanced units degrade more easily. This important lesson has led the TRADOC and the IBCTs to stabilize soldiers so that turbulence from incoming soldiers is minimized. While this is understandable based upon the unit's uniqueness, it is tacit admission from TRADOC that training soldiers for the Interim Force (and the Objective Force as well) involves a vastly more complex array of skills and a more highly trained combat soldier. In other words, until all units are digitized, not all infantrymen are equal.

CHAPTER FIVE

CONCLUSION

> The Army needs competent and versatile soldiers able to accomplish missions in a challenging and ever changing global environment.[108]
>
> Field Manual 3-0
> (DRAG Edition)
> 15 June 2000

The Army is developing an Objective Force that it simply may not be able to adequately man past the year 2020. The future battlefield and the way the U.S. Army will experience war were examined to determine what will be demanded from soldiers in the Objective Force. The Army's method of recruiting and classifying soldiers was then examined to determine if that system can meet future changes in recruiting needs. Lastly, the Army's training experiences in regards to experiments, initiatives, and the IBCT was examined to see whether the Army was prepared to train the new high-tech combat soldier of the Objective Force.

Warfare will change dramatically in the next twenty years. Technology continues to develop more lethal, more precise, and more easily employed weaponry that will expand battlespace. As a result, soldiers will operate in flatter organizations, be more widely dispersed on the battlefield, and operate vastly more complex technologies and weaponry. Increases in vulnerability will also cause soldiers to be more widely separated from parent organizations, causing soldiers to take on a greater share of their own logistical and administrative support.

The battlefield will also demand more of the soldier. The U.S. Army is shifting to a more rapidly deployable force, designed top handle a greater range of missions that possessed "full spectrum dominance." Adding to these requirements are ever-greater casualty aversion among the American public and civil leaders as well as an aversion to collateral damage on the battlefield.

Changes in doctrine will lead to a greater degree of involvement in Stability or Support Operations, more involvement in joint, combined, and interagency operations, and a greater emphasis on the offensive when conducting combat operations. What these trends demand of the future soldier is that he be more mature, that he be trained as a leader at a younger age, and that he possess greater judgement, initiative, and leadership skills. These trends also demand that the Objective Force be better trained over a wider range of skills without needing train-ups and readiness exercises before operations.

It is important to note that the Army, and Army Transformation in particular, agrees with this basic view of the future battlefield. Because of that, General Shinseki's vision is that the Army capitalizes upon technologies, both present and future, to allow the transformed force to dominate the future battlefield. Army Transformation tacitly acknowledges that this will not be possible unless the future soldier possesses the many traits outlined above. The pertinent question is, can we find the citizen of tomorrow – or today, for that matter – to make the soldier of the future?

While the remainder of the Army strives to change for tomorrow, USAREC has been fighting a rear-guard type operation in order just to man the Army of today. A near decade-long trend of recruiting shortfalls has only recently been abated. It is yet to be determined if the Army can make this year's recruiting numbers success a long-term trend. What the Army and USAREC do not seem poised to do is to recruit the better quality soldier needed for the Objective Force. Quite to the contrary, the Army has begun to sacrifice quality to meet the force's end-strength. The number of non-high school graduates, high school equivalency degree holders, and sub-par ASVAB scorers have begun to creep upward beginning in 1994. This is likely a measure of the decrease in the propensity of young people to serve, a ever-increasing gulf between the Army and the public, and the continuing labor market squeeze that makes civilian employment more attractive than military service.

What may be USAREC's saving grace is that it recognizes the need to change its recruiting program. USAREC has shifted its recruiting "center of gravity" to more appropriate populations, altered its marketing strategy, and changed its target population. USAREC has also benefited from increased funding for advertisement and marketing. Lastly, the Army, understanding the pending manpower meltdown, has shifted tremendous personnel resources and leeway at USAREC to provide a more concentrated recruiting effort.

Along with its accurate view of the future battlefield, the Army does possess the tools to train the soldier of tomorrow. While today's combat soldiers may not have the prerequisite of being trained in high technology information and weapons systems as a matter of course, the Army does have the knowledge base to make this training a reality. The Army's experiences with special operating forces, Army Aviation, and the various high-tech combat support and combat service support are a good foundation upon which to build a successful institutional base of individual training for the Objective Force. Additionally, the IBCT has begun to develop training doctrine and methodologies upon which TRADOC can mold their advanced individual training for the Objective Force's MOSs.

The linchpin for the manning of the Objective Force appears to be the Army's ability to recruit the right civilian in 2020. The overall conclusion of this study is that given the current general pay, benefits and attractiveness of military service, the citizen the Army needs in the year 2020 will generally be unwilling to serve in the Army's requisite numbers. That person is more likely to go to college, be in college, or seek employment in the technology sector. How can this be overcome?

RECOMMENDATIONS

In order to make recommendations as a conclusion to this study, an assumption must be made that the Army is not likely to have the luxury of universal military service – the draft – any time in the near future. The appropriate branch plan from this assumption would be to throw

away this study, since the Army would have its pick of the best and brightest for tomorrow's Army. However, as Lieutenant Colonel Reuben Jones of the Army War College asserted in his 2000 study, the country has only generally accepted conscription in times of great national emergency.[109] Discussion of the draft does have tangible benefits for the Army. For example, debate concerning the draft generally forces the American public to acknowledge that it has a professional, standing Army that must be supported.

As a result, the final recommendation of this study is that the Army take three actions to man the Objective Force. First, the Army should set baseline requirements for a slightly older soldier in the combat MOSs of the Objective Force. Second, the Army should develop screening methods, akin to those used for SOF and Ranger recruiting, to screen for soldiers with high levels of initiative, leadership traits, and aggressiveness. Third, recognizing that combat units will be smaller and flatter, the Army should seek higher levels of pay overall, while seeking additional pay bonuses and retention pays for soldiers in Objective Force Combat MOSs. By taking these steps, the Army can assure itself of having the right soldiers to man the Objective Force. If the Army makes no changes, the Objective Force could become a failed, camouflage-colored Internet start-up company.

[1] Eric K. Shinseki, *Army Chief of Staff Arrival Ceremony Speech* (2000, accessed October 6, 2000, 10:24 a.m.); available from http://www.army.mil/csa/990622.htm.

[2] *The Army Transformation* (US Army, 2000, accessed October 6, 2000, 10:21 a.m.); available from http://www.army.mil/armyvision/transform.htm.

[3] Michael Howard and Roger Louis, eds. *The Oxford History of the 20th Century* (New York: Oxford University Press, 1998), 185-186.

[4] Major General Robert H. Scales, Jr., *Future Warfare Anthology* (Carlisle Barracks, PA: US Army War College, 1999), 88.

[5] Scott R. Gourley, "Future Combat Systems: A Revolutionary Approach to Combat Victory," *Army*, July 2000, 23.

[6] Robert D. Kaplan, *The Coming Anarchy: Shattering the Dreams of the Post Cold War* (New York, NY: Random House, 2000), preface xi-xvi.

[7] "Field Manual 3-0, Operations (Drag Edition), (Department of the Army, 2000), 1-17.

[8] *The Army Vision*(US Army, 2000, accessed October 6, 2000, 10:22 a.m.); available from http://www.army.mil/armyvision/chain.htm.

[9] Lieutenant General Paul J. Kern, "The Future Battlefield," *Army* 2000, 19-20.

[10] Douglas A. Macgregor, *Breaking the Phalanx: A New Design for Landpower in the 21st Century* (Westport, CT: Praeger, 1997), 4-5.

[11] "Interview with Secretary of the Army Caldera: Army Transformation Sells Itself," *Army*, September 2000.

[12] Diane Tsimekles, "Gaddis: Big Year Ends Recruiting 'Death Spiral'," *Army Times*, August 7, 2000.

[13] Ibid.

[14] Vince Crawley, "Pentagon Taps Ad Consultants to Improve Recruiting Campaign," *Army Times*, August 7, 2000.

[15] Tsimekles.

[16] Vince Crawley, "Record Number of Young Soldiers Bailing out Early," *Army Times*, July 21, 2000.

[17] Staff Sergeant Kathleen J. Rhem, "Tomorrow's Grunts Need to Be Cream of the Crop," *Fort Leavenworth Lamp*, September 7, 2000.

[18] Sun-Tzu, *The Art of Warfare*, trans. Roger T. Ames (New York: Ballantine Books, 1993), 103.

[19] Kern, 20.

[20] Scales, v.

[21] Ibid, vi.

[22] *The Army Vision* (US Army, 2000, accessed October 6, 2000, 10:22 a.m.); available from http://www.army.mil/armyvision/chain.htm.

[23] II Douglas V. Johnson, ed. *Academic Year 97 Compendium: Army after Next Project* (Carlisle Barracks, PA: Army War College, 1998), 4.

[24] Gordon R. Sullivan and Anthony M. Coroalles, *The Army in the Information Age* (Carlisle Barracks, PA: Army War College, 1995), 4.

[25] Kern, General Kern explores the way that technological developments are increasing weapon lethality while at the same time rendering them less vulnerable to detection by enemy observation and engagement.

[26] Douglas V. Johnson, ed., 5-8.

[27] *Future Ground Combat Systems (Multi-Mission Combat Systems)* (The Defense Advanced Research Projects Agency, 1999), 5.

[28] Douglas V. Johnson, ed., 41.

[29] Ibid., 43.

[30] Eric K. Shinseki, *Army Chief of Staff Arrival Ceremony Speech* (2000, accessed October 6, 2000, 10:24 a.m.); available from http://www.army.mil/csa/990622.htm.

[31] "Field Manual 3-0, Operations (Drag Edition), (Department of the Army, 2000), 11-1.

[32] *Future Ground Combat Systems (Multi-Mission Combat Systems)* (The Defense Advanced Research Projects Agency, 1999), 5-8.

[33] Douglas V. Johnson, ed., 111.

[34] *The Defence of Fombler's Ford: A Few Experiences in the Field Defence for Detached Posts Which May Prove Useful in Our Next War* (The Defense Advanced Research Projects Agency, 2000).

[35] *The Army Vision* (US Army, 2000, accessed October 6, 2000, 10:22 a.m.); available from http://www.army.mil/armyvision/chain.htm.

[36] *Joint Vision 2020* (Joint Chiefs of Staff, 2000, accessed October 6, 2000, 9:55 a.m.); available from http://www.dtic.mil/jv2020/jv2020.doc.,

[37] *The Army Vision* (US Army, 2000, accessed October 6, 2000, 10:22 a.m.); available from http://www.army.mil/armyvision/chain.htm.

[38] Kaplan, xi-xvi.

[39] Scales, 9.

[40] Kaplan, 21-87.

[41] Scales, vi.

[42] Macgregor, 232.

[43] "Field Manual 3-0, Operations (Drag Edition), (Department of the Army, 2000).

[44] Ibid., 2-1.

[45] Ibid., 9-5.

[46] "Interview with Secretary of the Army Caldera: Army Transformation Sells Itself," *Army*, September 2000.

[47] Carl Von Clausewitz, *On War*, ed. Michael Howard and Peter, trans. Michael Howard and Peter (Princeton, New Jersey: Princeton University Press, 1976), 358.

[48] Douglas A. Macgregor, "Setting the Terms for Future Battle for Force XXI, 1995, Association of the US Army, The Land Warfare Papers, Arlington, Va., 4.

[49] Ibid, 4.

[50] Douglas V. Johnson, ed., 33.

[51] Ibid., 33.

[52] Rhem.

[53] Ibid.

[54] Ibid.

[55] Clausewitz, 102.

[56] Michael Ignatieff, *Virtual War: Kosovo and Beyond* (New York, NY: Metropolitan Books, Henry Holt & Company, 2000), 174.

[57] Douglas V. Johnson, ed., 40.

[58] Rhem.

[59] S.L.A. Marshall, *Men against Fire* (Gloucester, Mass.: Peter Smith, 1978), 22.

[60] Martin F. Wiskoff and Glenn F. Rampton, eds. *Military Personnel Measurement: Testing, Assignment, and Evaluation* (New York: Praeger Publishing, 1989), This book provides a number of excellent essays that discuss the difficulty of evaluating soldiers as recruits, soldiers and leaders.

[61] Crawley, "Record Number of Young Soldiers Bailing out Early,".

[62] Lola M. Zook, *Soldier Selection: Past, Present, and Future* (Alexandria, VA: United States Army Research Institute for the Behavioral and Social Sciences, 1996), 8.

[63] Ibid, 4.

[64] Ibid, 4.

[65] Tsimekles.

[66] Ibid.

[67] Zook, 8.

[68] Ibid, 8.

[69] Lieutenant Colonel John P. Mikula, “The Challenges of Manning the Post-Cold War Army” (U.S. Army War College, 1999), 13.

[70] Richard J. Newman, "Dumbing Down the Military," *US News and World Report*, November 23, 1998.

[71] Colonel Greg Parlier, *Briefing: Recruiting Research* (U.S. Army Recruiting Command, Office of Program Analysis and Evaluation, 2000, accessed October 6, 2000); available from http://www.usarec.army.mil/hq/spo/Index.htm.

[72] Crawley, “Record Number of Young Soldiers Bailing out Early”.

[73] Zook, 9.

[74] Mikula, 7.

[75] Crawley, “Record Number of Young Soldiers Bailing out Early”.

[76] Ibid.

[77] Vince Crawley, "Retention Upswing Masks Exodus of Key Personnel," *Navy Times*, July 10, 2000.

[78] Vince Crawley, “Young Officers, Key Enlisted Still Leaving at High Rates,” *Air Force Times*, July 10, 2000.

[79] Mikula, 11.

[80] Colonel Greg Parlier, *Briefing: Manning the Army of the Future* (U.S. Army Recruiting Command, Office of Program Analysis and Evaluation, 2000, accessed October 6, 2000); available from http://www.usarec.army.mil/hq/spo/Index.htm.

[81] Ibid.

[82] Ibid.

[83] Mikula.

[84] Parlier, *Briefing: Manning the Army of the Future*.

[85] Jim Tice, "Lack of Grass-Roots Support Hinders Recruiting, Study Says," *Army Times*, June 5, 2000.

[86] Parlier, *Briefing: Manning the Army of the Future*.

[87] Ibid.

[88] Tsimekles.

[89] *CGSC Service to the Nation Program*. (US Army Command and General Staff College, 2000. Accessed November 2, 2000): Available from http://www.cgsc-army.mil/stn.htm.

[90] Major General Evan Gaddis, *Briefing: Recruiting Update for Two Star Commander's Conference* (U.S. Army Recruiting Command, Office of Program Analysis and Evaluation, 2000, accessed October 6, 2000); available from http://www.usarec.army.mil/hq/spo/Index.htm.

[91] *Knowledge and Speed: Battle Force and the U.S. Army of 2025, the 1998 Annual Report on the Army after Next Project to the Chief of Staff of the Army* (Fort Monroe, VA: Headquarters, United States Army Training and Doctrine Commander, 1998), 28.

[92] Zook, 5.

[93] Ibid, 58.

[94] Ibid, 58.

[95] *Student Text 63-1: Division and Corps Logistics* (US Army Command and General Staff College: Department of the Army, 2000), 9-11.

[96] Ibid, 7-3.

[97] *Summary of the Army Experiment Program and AE1-AE6* (U.S. Army, 2000, accessed October 12, 2000); available from http://www.armyexperiment.net/aepublic/previous_ea/.

[98] Ibid.

[99] *Army Experiment Four* (U.S. Army, 2000, accessed October 12, 2000); available from http://www.armyexperiment.net/aepublic/previous_ea/ae4_ps.htm.

[100] *Fourth Division History* (US Army, 2000, accessed October 12, 2000); available from http://hood-ivygreen.army.mil/history/history.asp/present.

[101] Major General Benjamin S. Griffin and Lieutenant Colonel Archie Davis, "Operation-Centric Warfare: Setting the Conditions for Success at Brigade and Battalion," *Army*, August 2000.

[102] Ibid.

[103] Colonel Gregory Eckert and Major James Phillips, "Digital Training: The Way Ahead," *Army*, August 2000.

[104] Ibid.

[105] Dennis Steele, "Soldiering Outside the Box," *Army*, September 2000, 22.

[106] Ibid, 24.

[107] Ibid, 26.

[108] "Field Manual 3-0, Operations (Drag Edition), (Department of the Army, 2000).

[109] Lieutenant Colonel Reuben D. Jones, “U.S. Army Recruiting: Challenges and Fixes” (U.S. Army War College, 2000), 13.

BIBLIOGRAPHY

Knowledge and Speed: Battle Force and the U.S. Army of 2025, the 1998 Annual Report on the Army after Next Project to the Chief of Staff of the Army. Fort Monroe, VA: Headquarters, United States Army Training and Doctrine Commander, 1998.

Future Ground Combat Systems (Multi-Mission Combat Systems).: The Defense Advanced Research Projects Agency, 1999.

Army Experiment Four. U.S. Army, 2000. Accessed October 12, 2000. Available from http://www.armyexperiment.net/aepublic/previous_ea/ae4_ps.htm.

The Army Transformation. US Army, 2000. Accessed October 6, 2000, 10:21 a.m. 2000. Available from http://www.army.mil/armyvision/transform.htm.

The Army Vision. US Army, 2000. Accessed October 6, 2000, 10:22 a.m. 2000. Available from http://www.army.mil/armyvision/chain.htm.

The Defence of Fombler's Ford: A Few Experiences in the Field Defence for Detached Posts Which May Prove Useful in Our Next War.: The Defense Advanced Research Projects Agency, 2000.

"Field Manual 3-0, Operations (Drag Edition).".: Department of the Army, 2000.

Fourth Division History. US Army, 2000. Accessed October 12, 2000. Available from http://hood-ivygreen.army.mil/history/history.asp/present.

"Interview with Secretary of the Army Caldera: Army Transformation Sells Itself." *Army*, September 2000, 29-30.

Joint Vision 2020. Joint Chiefs of Staff, 2000. Accessed October 6, 2000, 9:55 a.m. 2000. Available from http://www.dtic.mil/jv2020/jv2020.doc.

Student Text 63-1: Division and Corps Logistics. US Army Command and General Staff College: Department of the Army, 2000.

Summary of the Army Experiment Program and AE1-AE6. U.S. Army, 2000. Accessed October 12, 2000. Available from http://www.armyexperiment.net/aepublic/previous_ea/.

Clausewitz, Carl Von. *On War*. Translated by Michael Howard and Peter, ed. Michael Howard and Peter. Princeton, New Jersey: Princeton University Press, 1976.

Crawley, Vince. "Pentagon Taps Ad Consultants to Improve Recruiting Campaign." *Army Times*, August 7, 2000, 23.

_____. "Record Number of Young Soldiers Bailing out Early." *Army Times*, July 21, 2000, 21.

_____. "Retention Upswing Masks Exodus of Key Personnel." *Navy Times*, July 10, 2000, 16.

Douglas V. Johnson, II, ed. *Academic Year 97 Compendium: Army after Next Project*. Carlisle Barracks, PA: Army War College, 1998.

Eckert, Colonel Gregory, and Major James Phillips. "Digital Training: The Way Ahead." *Army*, August 2000, 29-32.

Gaddis, Major General Evan. *Briefing: Recruiting Update for Two Star Commander's Conference*. U.S. Army Recruiting Command, Office of Program Analysis and Evaluation, 2000. Accessed October 6, 2000. Available from http://www.usarec.army.mil/hq/spo/Index.htm.

Gourley, Scott R. "Future Combat Systems: A Revolutionary Approach to Combat Victory." *Army*, July 2000, 23-26.

Griffin, Major General Benjamin S., and Lieutenant Colonel Archie Davis. "Operation-Centric Warfare: Setting the Conditions for Success at Brigade and Battalion." *Army*, August 2000, 21-24.

Howard, Michael, and Roger Louis, eds. *The Oxford History of the 20th Century*. New York: Oxford University Press, 1998.

Ignatieff, Michael. *Virtual War: Kosovo and Beyond*. New York, NY: Metropolitan Books, Henry Holt & Company, 2000.

Jones, Lieutenant Colonel Reuben D. "U.S. Army Recruiting: Challenges and Fixes." U.S. Army War College, 2000.

Kaplan, Robert D. *The Coming Anarchy: Shattering the Dreams of the Post Cold War*. New York, NY: Random House, 2000.

Kern, Lieutenant General Paul J. "The Future Battlefield." *Army*2000.

Macgregor, Douglas A. "Setting the Terms for Future Battle for Force XII, 1995.". Association of the US Army, The Land Warfare Papers, Arlington, VA.

_____. *Breaking the Phalanx: A New Design for Landpower in the 21st Century*. Westport, CT: Praeger, 1997.

Marshall, S.L.A. *Men against Fire*. Gloucester, Mass.: Peter Smith, 1978.

Mikula, Lieutenant Colonel John P. "The Challenges of Manning the Post-Cold War Army." U.S. Army War College, 1999.

Newman, Richard J. "Dumbing Down the Military." *US News and World Report*, November 23, 1998, 22.

Parlier, Colonel Greg. *Briefing: Manning the Army of the Future*. U.S. Army Recruiting Command, Office of Program Analysis and Evaluation, 2000. Accessed October 6, 2000. Available from http://www.usarec.army.mil/hq/spo/Index.htm.

_____. *Briefing: Recruiting Research*. U.S. Army Recruiting Command, Office of Program Analysis and Evaluation, 2000. Accessed October 6, 2000. Available from http://www.usarec.army.mil/hq/spo/Index.htm.

Rhem, Staff Sergeant Kathleen J. "Tomorrow's Grunts Need to Be Cream of the Crop." *Fort Leavenworth Lamp*, September 7, 2000, 4.

Scales, Major General Robert H., Jr. *Future Warfare Anthology*. Carlisle Barracks, PA: US Army War College, 1999.

Shinseki, Eric K. *Army Chief of Staff Arrival Ceremony Speech*. 2000. Accessed October 6, 2000, 10:24 a.m. 2000. Available from http://www.army.mil/csa/990622.htm.

Steele, Dennis. "Soldiering Outside the Box." *Army*, September 2000, 20-28.

Sullivan, Gordon R., and Anthony M. Coroalles. *The Army in the Information Age*. Carlisle Barracks, PA: Army War College, 1995.

Sun-Tzu. *The Art of Warfare*. Translated by Roger T. Ames. New York: Ballantine Books, 1993.

Tice, Jim. "Lack of Grass-Roots Support Hinders Recruiting, Study Says." *Army Times*, June 5, 2000, 14.

Tsimekles, Diane. "Gaddis: Big Year Ends Recruiting 'Death Spiral'." *Army Times*, August 7, 2000, 8.

Wiskoff, Martin F., and Glenn F. Rampton, eds. *Military Personnel Measurement: Testing, Assignment, and Evaluation*. New York: Praeger Publishing, 1989.

Zook, Lola M. *Soldier Selection: Past, Present, and Future*. Alexandria, VA: United States Army Research Institute for the Behavioral and Social Sciences, 1996.